

**Amendments to the Drawings:**

The attached sheet(s) of drawings include changes as listed below. The attached replacement sheet(s) replace the original sheet(s).

The changes are as follows.

A new set of line drawings is provided and attached herewith. Specifically, 9 sheets of line drawings are provided.

Original drawing 8 is renumbered 8a, and original drawing 8a is renumbered 8b.

Attachment: 9 Replacement Sheets.

## **R E M A R K S**

The office action of 10-04-2004 has been reviewed and its contents carefully noted. Reconsideration of this case, as amended, is requested. Claims 3-4 are cancelled. Claims 1-2, 5-6 remain in this case.

### **Preliminary Comments**

The claims were amended as follows, to correct typographical errors and other informalities. No new matter was introduced. Specifically:

- a. Claim 5 was amended to correct typographical errors.

### **Objections to the Drawing**

The drawings are objected to under 37 CFR 1.84 (b) (1) because Figures 1-8 appear to be photographs not suitable for reproduction. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office Action to avoid abandonment of the application.

New drawings, i.e. line drawings are submitted along with the instant response to Office Action. Reconsideration and withdrawal of the objections are respectfully requested.

### **Rejection(s) under 35 U.S.C. §102**

Claims 1-3, 5 and 6 are rejected under 35 U.S.C. 102(e) as being anticipated by Gramkow et al hereinafter referred to as Gramkow. Applicant respectfully disagrees with the rejection.

With regard to claim 1, etc, the Office Action states:

Gramkow et al discloses a **lead frame** in Figures 1 and 3, located **inside cover 38**. The cover has *a mounting surface at 68*. External connector 42 is shown in Figures 5, 6 and 7. The functional units mounted on the **lead frame** include sensors 26, 28, and solenoids 30 and 32.

Claim 1, as amended, recites:

1. A lead frame for mounting a plurality of variable cam timing system devices within the confines of a cam cover, the lead frame comprising:
  - a frame of insulating material for retaining or positioning of at least some of the variable cam timing system devices within the cam cover;
  - an electrical connector having a plurality of electrically conducting terminals accessible from outside the cam cover; and
  - a plurality of electrically conductive paths formed internal to insulating material of the frame, in electrical communication with at least some of the devices and the electrically conducting terminals, such that the frame, the connector and the paths form a single integral lead frame housing.

Gramkow teaches an adjustment device for an internal combustion engine, with at least one sensor unit and one actuator unit, at least two functional units are supported on a **common carrier unit** and combined into a **module** for mounting on the internal combustion engine.

As can be seen, Gramkow does NOT disclose a lead frame as alleged by the instant Office Action in that a lead frame disposed **within** the confines of a cam cover is claimed. Applicant respectfully point out to the Examiner that the Gramkow device is a module that is mounted outside the cam cover. The fact that Gramkow device is mounted outside the cover can be shown by referring to Figs. 1-7 of Gramkow, wherein an axial direction 64 is disclosed with respect to a camshaft of the internal combustion engine respectively in each figure. This direction 64 points *from* outside the engine *to* the inside of the engine. As can be seen, for

example, in Figs. 5-6 the relationship of the module and surface 68 clearly points that the module is outside the cover. Further, please refer to column 4, line 54-58.

In other words, Gramkow does NOT disclose a lead frame having a plurality of electrically conductive paths formed internal to insulating material of the frame, in electrical communication with at least some of the devices and the electrically conducting terminals, such that the frame, the connector and the paths form a single integral lead frame housing. Nor does Gramkow disclose an electrical connector having a plurality of electrically conducting terminals accessible from outside the cam cover.

Furthermore, the Gramkow device can be part of the engine or cam cover. See col. 3, lines 50-54. Because the adjustment device of Gramkow is external to the internal combustion engine and part of the device can serve as part of the engine or cam cover, it necessarily requires further adjustments or calibration of the Gramkow device or module onto the engine. In other words, a larger sealing area is required with its concomitant sealing and adjustment requirements because of the fact that the Gramkow device can be part of the engine or cam cover. Whereas, on the other hand, the present invention claims a lead frame disposed **within** the confines of an engine cover, having an insulating portion and an electrically conducting portion, wherein at least one electrically conducting interconnect is provided. In other words, the instant invention claims a lead frame having a plurality of electrically conductive paths formed **internal to** insulating material of the frame. See Fig. 8B.

Therefore, it is respectfully suggested that the rejection of independent claim 1 as being anticipated by Gramkow is overcome. Dependent claims 2-3, 5 and 6 being dependent upon and further limiting independent claim 1, should also be allowable for that reason, as well as for the additional recitations they contain. Reconsideration and withdrawal of the rejection are respectfully requested.

#### **Rejection(s) under 35 U.S.C. §103**

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gramkow et al in view of Petrosky et al..

Claim 4 is cancelled.

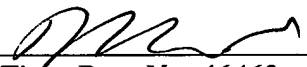
Reconsideration and withdrawal of the rejection are respectfully requested.

### **Conclusion**

Applicant believes the claims, as amended, are patentable over the prior art, and that this case is now in condition for allowance of all claims therein. Such action is thus respectfully requested. If the Examiner disagrees, or believes for any other reason that direct contact with Applicants' attorney would advance the prosecution of the case to finality, he is invited to telephone the undersigned at the number given below.

"Recognizing that Internet communications are not secured, I hereby authorize the PTO to communicate with me concerning any subject matter of this application by electronic mail. I understand that a copy of these communications will be made of record in the application file."

Respectfully Submitted:  
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By:   
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